AMENDMENTS TO CLAIMS

Amend the claims as follows:

1. (Currently Amended) A magnetic localization device, comprising:

a) a field generator for generating a magnetic field;

b) a field sensor for measuring the magnetic field;

c) a reference sensor for measuring the magnetic field at a known reference position; and

d) a control unit, which is arranged for determining ~~the~~ a position of the field sensor relative to the field generator and thereby ~~for~~ compensating for external field distortions by taking the reference sensor into consideration and correcting the determined position of the field sensor if external field distortions are present.

2. (Previously Presented) A localization device as claimed in claim 1, wherein the spatial position of the field generator is known.

3. (Currently Amended) A localization device as claimed in claim 1, wherein at least one of the field generator and[[/or]] the reference sensor [[are]] is fastened to the gantry of a computer tomograph.

4. (Currently Amended) A localization device as claimed in claim 1, wherein the control unit contains a memory with a calibration function, which provides a correction shift for [[the]] an uncorrected determined position of the field sensor based on measured signals of the reference sensor and the field sensor.

5. (Canceled)

6. (Currently Amended) A method for position measurement with a magnetic localization device, comprising the steps of:

a) collecting the signals of <u>at least one of</u> a field sensor and[[/or]] a field generator;

b) collecting the signals of a magnetic reference sensor, which is placed at a known spatial position relative to the field generator or to the field sensor; <u>and</u>

c) determining ~~the~~ <u>a</u> position of the field sensor relative to the field generator, where external field distortions are compensated <u>for</u> by taking the signals of the reference sensor into consideration <u>and correcting the determined position of the field sensor if external field distortions are present</u>.

7. (Currently Amended) A method as claimed in claim 6, wherein a correction function is determined, which indicates a correction shift for [[the]] <u>an</u> uncorrected determined position of the field sensor in dependence on the signal of the reference sensor and the uncorrected determined position of the field sensor.

8. (Currently Amended) A method ~~as claimed in claim 7,~~ <u>for position measurement with a magnetic localization device, comprising the steps of:</u>

<u>a) collecting the signals of at least one of a field sensor and a field generator;</u>

<u>b) collecting the signals of a magnetic reference sensor, which is placed at a known spatial position relative to the field generator or to the field sensor;</u>

<u>c) determining the position of the field sensor relative to the field generator, where external field distortions are compensated for by taking the signals of the reference sensor into consideration;</u>

<u>d) wherein a correction function is determined, which indicates a correction shift for an uncorrected determined position of the field sensor in dependence on the signal of the reference sensor and the uncorrected determined position of the field sensor; and</u>

e)   wherein the correction function for support points in a volume of interest is empirically determined and extended by extrapolation or interpolation respectively on the whole volume.

9. (Previously Presented) A method as claimed in claim 6, wherein a parameter is determined from the signal of the reference sensor, which parameter characterizes the external field distortion.

10. (Currently Amended) A method ~~as claimed in claim 9,~~ for position measurement with a magnetic localization device, comprising the steps of:

a)   collecting the signals of at least one of a field sensor and a field generator;

b)   collecting the signals of a magnetic reference sensor, which is placed at a known spatial position relative to the field generator or to the field sensor;

c)   determining the position of the field sensor relative to the field generator, where external field distortions are compensated for by taking the signals of the reference sensor into consideration;

d)   wherein a parameter is determined from the signal of the reference sensor, which parameter characterizes the external field distortion; and

e)   wherein the parameter describes the angle of rotation of a computer tomograph situated in the vicinity of the localization device.

11. (New) A method as claimed in claim 7, wherein the correction shift further depends on empirical measurements taken with a probe sensor at one or more support points in a volume of interest.

12. (New) A method as claimed in claim 7, wherein the signal of the reference sensor is used to determine a correction parameter describing an angle of rotation of a computer tomograph situated in the vicinity of the localization device.

13. (New) A localization device as claimed in claim 4, wherein the correction shift is further based on empirical measurements taken with a probe sensor at one or more support points in a volume of interest.

14. (New) A localization device as claimed in claim 4, wherein the measured signals of the reference sensor are used to determine a correction parameter describing an angle of rotation of a computer tomograph situated in the vicinity of the localization device.